

REMARKS

The originally filed Declaration is objected to as defective due to an incomplete signature. A new and complete Declaration has been executed and is enclosed herewith.

Claims 1, 3, 5-6, 21, 24-27, 29 and 30 were rejected under 35 U.S.C. § 102(b) as anticipated by Supernaw et al. (U.S. 5,065,016). Claims 1, 3, 5, 9, 13-16, 21, 24-25, 28, 32, 36-39 and 43 were rejected under 35 U.S.C. § 102(b) as anticipated by Paske et al. (U.S. 4,829,176). Claims 2, 19-20, 22 and 42-43 were rejected under 35 U.S.C. § 103(a) as obvious over Supernaw et al. (U.S. 5,065,016) in view of Humphrey (U.S. 3,539,806). Claims 4 and 23 were rejected under 35 U.S.C. § 103(a) as obvious over Supernaw et al. (U.S. 5,065,016). Claim 7 was rejected under 35 U.S.C. § 103(a) as obvious over Supernaw et al. (U.S. 5,065,016) in view of Stoller et al. (U.S. 5,841,135). Claims 8 and 31 were rejected under 35 U.S.C. § 103(a) as obvious over Supernaw et al. (U.S. 5,065,016) in view of Pauley et al. (U.S. 5,191,210). Claims 9-12 and 32-35 were rejected under 35 U.S.C. § 103(a) as obvious over Supernaw et al. (U.S. 5,065,016) in view of Williams (U.S. 4,743,755). Claims 17-18 and 40-41 were rejected under 35 U.S.C. § 103(a) as obvious over Paske et al. (U.S. 4,829,176).

Independent claims 1 and 21 have been amended to include limitations that are not taught or suggested by the prior art. Claims 2 and 22 have been canceled without prejudice. More specifically, amended claims 1 and 21 set forth a novel and nonobvious configuration wherein a radiation detector is disposed within another detector to simultaneously provide multiple types of radiation phenomena measurements.

Though the cited art describes various radiation detector designs, it fails to show the embodiments of the present invention. The majority of detectors proposed by the prior art are solely for either gamma or neutron detection. Even if the cited art had taught or suggested the claimed invention, there is no teaching or suggestion in any of the references to combine their elements to do that which is claimed by the invention. Those that are proposed for more than one type of measurement are not akin to the present invention. Prior techniques proposed detecting phenomena including a broad spectrum of energy signatures for later analysis. Expressly missing from the prior art is a detector design wherein one detector is housed within another to simultaneously provide multiple types of radiation phenomena measurements.


Designing a radiation detector system suitable for simultaneous subsurface measurements of multiple types of radiation phenomena is not an obvious exercise and involves the use of

available space and physical measurements applied in a direct way to insure effective operation. Like many technologies, what seems obvious once pointed out, is much more complex to implement.

Applicants believe claims 1, 3-21 and 23-43 are in condition for allowance and passage to issuance is respectfully requested. Applicants also request initialed copies of the Information Disclosure Statement submitted electronically on January 9, 2004 (duplicate copy attached) and the newly submitted Supplemental Information Disclosure Statement (also attached herewith) for the present application. If the Examiner believes that a telephone conference would be advantageous in advancing the issuance of the present application, a call to the undersigned at (281) 285-4562 is encouraged.

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Respectfully submitted,


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